

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A remote management system for performing remote management of a plurality of electronic apparatuses via a communication line and an intermediary apparatus by a remote managing apparatus, wherein:

the remote managing apparatus comprises:

a first storage part that stores first software configured to update second software stored by each of the electronic apparatuses; and

a remote managing apparatus software transmitting part that transmits the first software retrieved from the first storage part to the intermediary apparatus via the communication line;

a schedule generating part that generates an update date and time for updating the second software; and

a schedule transmitting part that transmits the generated update date and time to the intermediary apparatus;

the intermediary apparatus comprises:

a second storage part;

a software writing part that writes the first software to the second storage part when acquiring the first software from the remote managing apparatus software transmitting part;

an intermediary apparatus software transmitting part that transmits the first software stored in the second storage part to at least one of the electronic apparatuses when the at least one of the electronic apparatuses requires the second software stored therein to be updated;

a transmission rate measuring part that measures a first transmission rate between the intermediary apparatus and the remote managing apparatus and a second transmission rate between the intermediary apparatus and the at least one of the electronic apparatus; and

a transmission rate reporting part that reports the first and second transmission rates to the remote managing apparatus;

the electronic apparatuses each comprises:

a non-volatile storage part storing the second software controlling an operation of the electronic apparatus; and

a software updating part that updates the second software stored in the non-volatile storage part based on the first software when receiving the first software from the intermediary apparatus software transmitting part, wherein

the schedule generating part of the remote managing apparatus generates the update date and time based on an amount of data of the first software stored in the first storage part and the first and second transmission rates received from the intermediary apparatus.

Claim 2 (Original): The remote management system as claimed in claim 1, wherein, when two or more of the electronic apparatuses require the second software thereof to be updated, the software transmitting part of the intermediary apparatus transmits the first software stored in the second storage part to each of the two or more of the electronic apparatuses.

Claim 3 (Previously Presented): The remote management system as claimed in claim 2, wherein

the first software stored in the first storage part of the remote managing apparatus comprises software programs of different types;

the second software differs in type between two or more of the electronic apparatuses;  
and

the intermediary apparatus software transmitting part transmits two or more of the software programs of the first software to the two or more of the electronic apparatuses in accordance with the types of the second software thereof.

Claim 4 (Previously Presented): The remote management system as claimed in claim 1, wherein:

the remote managing apparatus software transmitting part transmits the first software stored in the first storage part to the intermediary apparatus at a request thereof; and

the intermediary apparatus further comprises:

a schedule writing part that writes the update date and time to the second storage part when receiving the update date and time from the remote managing apparatus; and

a transmission requesting part that requests the remote managing apparatus to transmit the first software to the intermediary apparatus when the update date and time stored in the second storage part is reached.

Claim 5 (Canceled).

Claim 6 (Previously Presented): The remote management system as claimed in claim 4, wherein:

the intermediary apparatus software transmitting part comprises a communication requesting part that makes a communication request to the at least one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the second storage part to the at least one of the electronic apparatuses, and transmits the first software stored in the second storage part to the at least one of the electronic apparatuses when receiving a response to said communication request therefrom; and

each of the electronic apparatuses comprises a response part that responds to said communication request when receiving said communication request from the intermediary apparatus.

Claim 7 (Previously Presented): The remote management system as claimed in claim 4, wherein:

the intermediary apparatus software transmitting part comprises a communication requesting part that makes a communication request for the at least one of the electronic apparatuses to communicate with the intermediary apparatus before transmitting the first software stored in the second storage part to the at least one of the electronic apparatuses; and each of the electronic apparatuses comprises:

a deferment period managing part that manages a performance deferment period from when said communication request from the intermediary apparatus is received to when it becomes possible to update the second software; and

a response part that responds to said communication request after passage of the performance deferment period.

Claim 8 (Previously Presented): The remote management system as claimed in claim 4, wherein:

the intermediary apparatus further comprises:

a status checking part that checks a status of the at least one of the electronic apparatuses; and

an update date and time changing part that changes the update date and time stored in the second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when it is determined based on a result of the checking by the status checking part that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

Claim 9 (Original): The remote management system as claimed in claim 4, wherein the intermediary apparatus further comprises an update date and time changing part that changes the update date and time stored in the second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when receiving a request to defer the updating of the second software from outside the intermediary apparatus.

Claim 10 (Previously Presented): The remote management system as claimed in claim 1, wherein:

the remote managing apparatus software transmitting part transmits the first software stored in the first storage part and the generated update date and time to the intermediary apparatus when the generated transmission date and time is reached;

the software writing part of the intermediary apparatus writes the first software and the update date and time to the second storage part when receiving the first software and the update date and time from the remote managing apparatus transmitting part; and

the intermediary apparatus software transmitting part transmits the first software stored in the second storage part to the at least one of the electronic apparatuses when the update date and time stored in the storage part is reached.

Claim 11 (Previously Presented): The remote management system as claimed in claim 10, wherein:

the schedule generating part of the remote managing apparatus generates the transmission date and time and the update date and time based on an amount of data of the first software stored in the first storage part and the first and second transmission rates received from the intermediary apparatus.

Claim 12 (Previously Presented): The remote management system as claimed in claim 10, wherein:

the intermediary apparatus software transmitting part comprises a communication requesting part that makes a communication request to the at least one of the electronic apparatuses for communication with the intermediary apparatus before transmitting the first software stored in the second storage part to the at least one of the electronic apparatuses, and transmits the first software stored in the second storage part to the at least one of the electronic apparatuses when receiving a response to said communication request therefrom; and

each of the electronic apparatuses comprises a response part that responds to said communication request when receiving said communication request from the intermediary apparatus.

Claim 13 (Previously Presented): The remote management system as claimed in claim 10, wherein:

the intermediary apparatus software transmitting part comprises a communication requesting part that makes a communication request for the at least one of the electronic apparatuses to communicate with the intermediary apparatus before transmitting the first software stored in the second storage part to the at least one of the electronic apparatuses; and each of the electronic apparatuses comprises:

a deferment period managing part that manages a performance deferment period from when said communication request from the intermediary apparatus is received to when it becomes possible to update the second software; and

a response part that responds to said communication request after passage of the performance deferment period.

Claim 14 (Previously Presented): The remote management system as claimed in claim 10, wherein:

the intermediary apparatus further comprises:

a status checking part that checks a status of the at least one of the electronic apparatuses; and

an update date and time changing part that changes the update date and time stored in the second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when it is determined based on a result

of the checking by the status checking part that the at least one of the electronic apparatuses is prevented from starting the updating of the second software immediately.

Claim 15 (Original): The remote management system as claimed in claim 10, wherein the intermediary apparatus further comprises an update date and time changing part that changes the update date and time stored in the second storage part so that a start of the updating of the second software is deferred for a predetermined period of time when receiving a request to defer the updating of the second software from outside the intermediary apparatus.

Claim 16 (Previously Presented): The remote management system as claimed in claim 1, wherein:

the intermediary apparatus comprises a status checking part that checks a status of the at least one of the electronic apparatuses; and

the intermediary apparatus software transmitting part comprises an updating necessity determining part that determines whether the updating of the second software of the at least one of the electronic apparatuses has normally ended based on a result of the checking by the status checking part, and repeats the transmission of the first software stored in the second storage to the at least one of the electronic apparatuses until the updating necessity determining part determines that the updating of the second software of the at least one of the electronic apparatuses has normally ended.

Claim 17 (Previously Presented): The remote management system as claimed in claim 16, wherein:



the updating necessity determining part of the intermediary apparatus determines that the updating of the second software of the at least one of the electronic apparatuses has normally ended when receiving a power-on report indicating that power is turned on from the at least one of the electronic apparatuses; and

each of the electronic apparatuses comprises:

a restart commanding part that causes the electronic apparatus to restart after the updating of the second software by the software updating part is completed; and  
a power-on reporting part that reports to the intermediary apparatus that the power is turned on after the restarting of the electronic apparatus.

Claim 18 (Previously Presented): The remote management system as claimed in claim 16, wherein the software transmitting part of the intermediary apparatus comprises a part that stops the transmission of the first software to the at least one of the electronic apparatuses when the transmission is prevented from being completed by a preset expiration date and time.

Claim 19 (Original): The remote management system as claimed in claim 1, wherein the software updating part of each of the electronic apparatuses comprises a part that cancels the updating of the second software when receiving a request to cancel the updating of the software from outside the electronic apparatus.

Claims 20-78 (Canceled).